Exhibit 12

EXHIBIT 12

CYWEE GROUP LTD,
vs.
HUAWEI DEVICE CO. LTD.,
HUAWEI DEVICE (DONGGUAN) CO. LTD., AND
HUAWEI DEVICE USA, INC.

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

EXEMPLARY CLAIM CHART

U.S. PATENT NO. 8,552,978 – Huawei Mate 10 Pro
Infringement Contentions

These contentions are disclosed to only provide notice of Plaintiff's theories of infringement. These contentions do not constitute proof nor do they marshal Plaintiff's evidence of infringement to be presented during trial.

U.S. Patent No. 8,552,978 – Huawei Mate 10 Pro

Claim 10

Claim 10 with claim constructions (text in brackets [] reflects the Court's claim construction or the parties' agreed claim construction in *CyWee Group, Ltd. v. Apple Inc.*, No. 3:13-cv-01853-HSG). Construed terms and constructions are underlined.

10. A method for compensating rotations of a 3D pointing device, comprising:

generating an orientation output associated with an orientation of the 3D pointing device associated with three coordinate axes of a global reference frame associated with Earth;

generatinq a first signal set comprising axial accelerations associated with movements and rotations of the 3D pointing device in the spatial reference frame;

generating a second signal set associated with Earth's magnetism; generating the orientation output based on the first signal set, the second signal set and the rotation output or based on the first signal set and the second signal set;

generating a rotation output associated with a rotation of the 3D pointing device associated with three coordinate axes of a spatial reference frame associated with the 3D pointing device; and

using the orientation output and the rotation output to generate a transformed output associated with a fixed reference frame associated with a display device [Court's construction: using the orientation output and the rotation output to generate a transformed output that corresponds to a two-dimensional movement in a plane that is parallel to the screen of a display device], wherein the orientation output and the rotation output is generated by a nine-axis motion sensor module; obtaining one or more resultant deviation including a plurality of deviation angles using a plurality of measured magnetisms Mx, My, Mz and a plurality of predicted magnetism Mx′, My′ and Mz′ for the second signal set.

Claim 10

A method for compensating rotations of a 3D pointing device, comprising:

Huawei Mate 10 Pro

Huawei Mate 10 Porsche design[1]

[1] All references to the Huawei Mate 10 Pro include, but are not limited to, the Mate 10 Porsche design, which is functionally equivalent to the Mate 10 Pro. See https://www.phonearena.com/news/Huawei-Mate-10-Pro-Mate-10-Porsche-Design-differences_id102298.

U.S. Patent No. 8,552,978 – Huawei Mate 10 Pro

Claim 10
generating an orientation output associated with an orientation of the 3D pointing device associated with three coordinate axes of a global reference frame associated with Earth;

See support for this element in Exhibit 7

U.S. Patent No. 8,552,978 – Huawei Mate 10 Pro

Claim 10

generating a first signal set comprising axial accelerations associated with movements and rotations of the 3D pointing device in the spatial reference frame;

See support for this element in Exhibit 7

U.S. Patent No. 8,552,978 – Huawei Mate 10 Pro

Claim 10

generating a second signal set associated with Earth's magnetism;

See support for this element in Exhibit 7

U.S. Patent No. 8,552,978 – Huawei Mate 10 Pro

Claim 10

generating the orientation output based on the first signal set, the second signal set and the rotation output or based on the first signal set and the second signal set;

See support for this element in Exhibit 7

U.S. Patent No. 8,552,978 – Huawei Mate 10 Pro

Claim 10
generating a rotation output associated with a rotation of the 3D pointing device associated with three coordinate axes of a spatial reference frame associated with the 3D pointing device; and

See support for this element in Exhibit 7

Claim 10

using the orientation output and the rotation output to generate a transformed output associated with a **fixed reference frame** associated with a **display device** [Court's construction: using the orientation output and the rotation output to generate a transformed output that corresponds to a two-dimensional movement in a plane that is parallel to the screen of a display device],

The **fixed reference frame** is defined by the horizontal and vertical axes of pixels on Huawei Mate 10 Pro's **display device**.
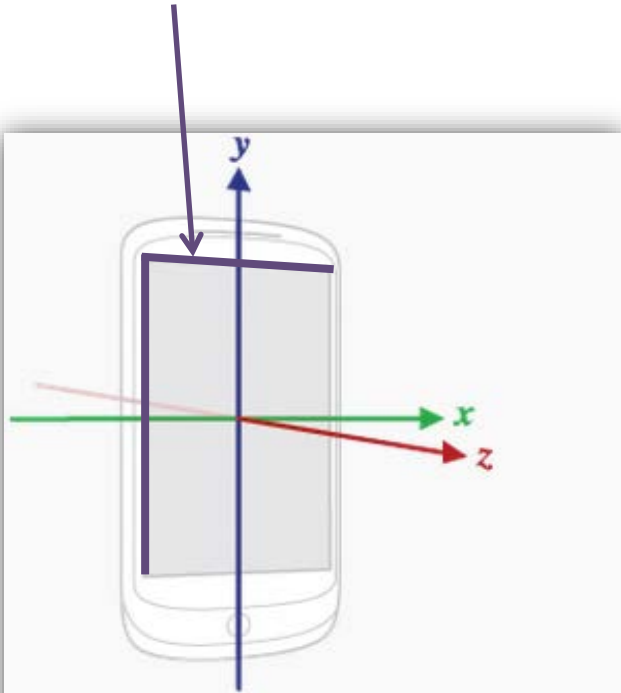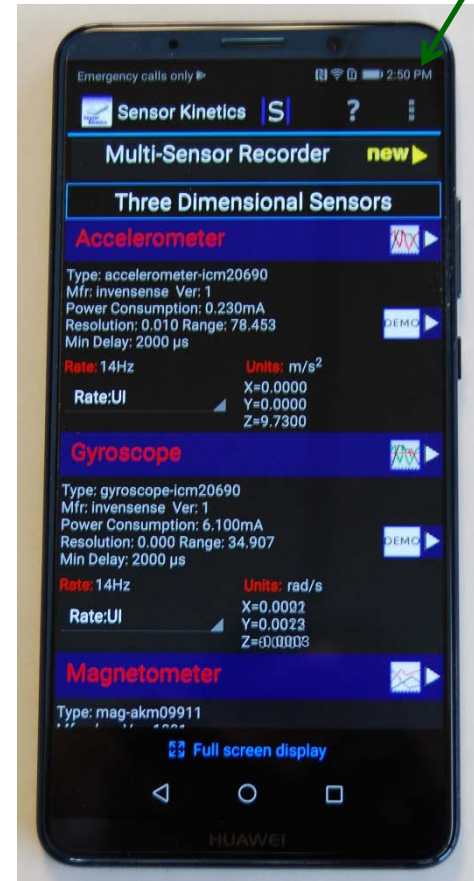

Figure 1. Coordinate system (relative to a device) that's used by the Sensor API.

Source: http://developer.android.com/guide/topics/sensors/sensors_overview.html#sensors-coords

U.S. Patent No. 8,552,978 – Huawei Mate 10 Pro
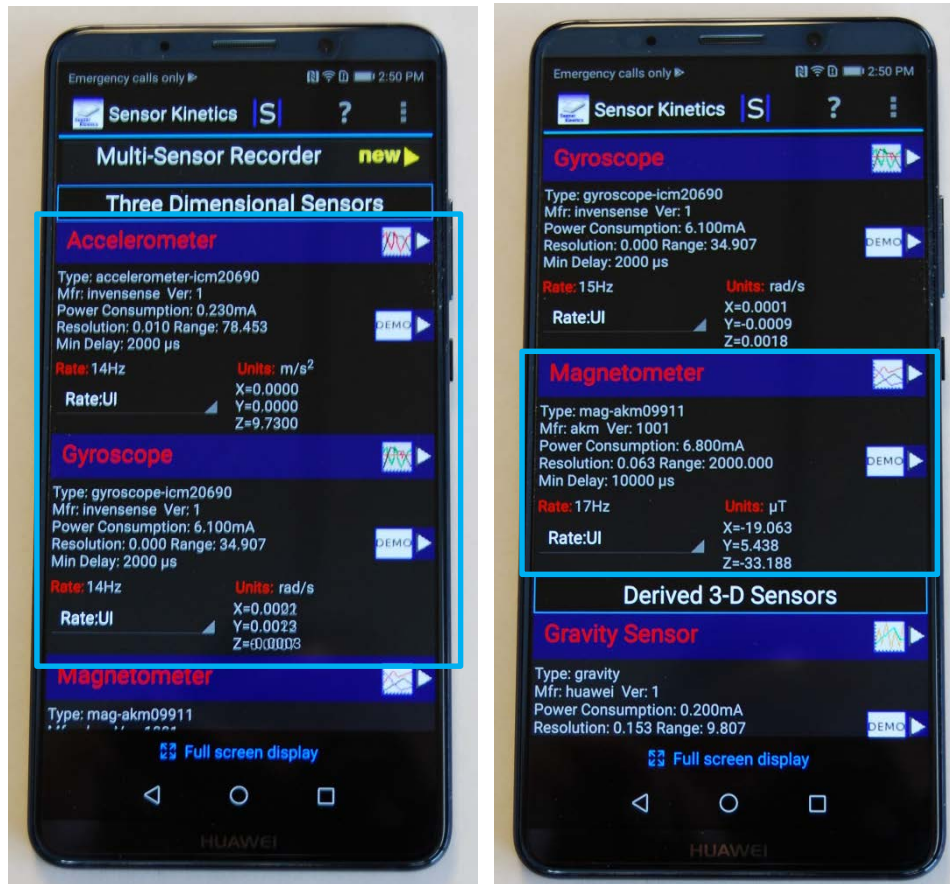
Claim 10
using the orientation output and the rotation output to generate a transformed output associated with a fixed reference frame associated with a display device [Court's construction: using the orientation output and the rotation output to generate a transformed output that corresponds to a two-dimensional movement in a plane that is parallel to the screen of a display device],

See support for this element in Exhibit 7

U.S. Patent No. 8,552,978 – Huawei Mate 10 Pro

Claim 10

wherein the orientation output and the rotation output is generated by a **nine-axis motion sensor module**;

The Huawei Mate 10 Pro includes a 3-axis gyroscope, a 3-axis accelerometer, and a 3-axis magnetometer which form a **nine-axis motion sensor module.**

Source: https://www.phonearena.com/phones/Huawei-Mate-10-Porsche-Design_id10702

U.S. Patent No. 8,552,978 – Huawei Mate 10 Pro

Claim 10
obtaining one or more resultant deviation including a plurality of deviation angles using a plurality of measured magnetisms Mx, My, Mz and a plurality of predicted magnetism Mx′, My′ and Mz′ for the second signal set.

See support for this element in Exhibit 7

U.S. Patent No. 8,552,978 – Huawei Mate 10 Pro

Claim 12

The method of claim 10, wherein the orientation output is a rotation matrix, a quaternion, a rotation vector, or comprises three orientation angles.

See support for this element in Exhibit 7